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ABSTRACT

This study identified maternal and family environmental characteristics predictive of school readiness in Black, Hispanic, and Caucasian children, and evaluated how these predictors operate in equivalent or dissimilar ways in the three ethnic groups. Subjects were approximately 600 6- and 7-year-old children of women participating in the National Longitudinal Study of Youth (NLSY), a yearly survey of youth (with an oversample of Black and low-income Caucasian subjects) who were first interviewed in 1979. Data for this study were obtained in 1986, when the mothers were 21 to 29 years old. Home visits and interviews provided extensive background information from which a variety of maternal and family environment measures were derived. Measures of children's school readiness and early achievement were also obtained during the home visits. Analysis indicated that several maternal and family predictors (including maternal ability level, maternal education, and family poverty status) showed consistent significant correlations with children's school readiness and achievement in all three ethnic groups. Grade level was also a significant predictor, especially for reading and math. The only variables that appeared to play different roles depending on ethnicity were spouse education and traditional maternal attitudes toward women's roles, which were significant predictors primarily among Hispanic families. (MM)

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SUMMARY OF SRCD POSTER PRESENTATION, NEW ORLEANS, MARCH 1993

MATERNAL AND FAMILY PREDICTORS OF SCHOOL READINESS IN BLACK, HISPANIC AND WHITE 6- AND 7-YEAR OLDS

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BACKGROUND AND PURPOSE: It is well known that school readiness and performance in young children tend to be associated with socioeconomic status and ethnicity. In recent years, increasing efforts have been made to go beyond these gross demographic indicators toward the identification of more specific features of children's home and family environments which may influence their development and school performance. The present study was addressed to just this concern: namely, to identify maternal and family environmental characteristics predictive of school readiness in 6 and 7 year old Black, Hispanic, and Caucasian children, and to evaluate the extent to which these predictors operate in equivalent or dissimilar manners in the three ethnic groups.

SUBJECTS: Approximately 600 six- and seven-year-old children of women participating in the National Longitudinal Study of Youth (NLSY) served as subjects. The women enrolled in this yearly survey were part of a representative national sample of 13 to 21 year old youth who were first interviewed in 1979. The survey oversampled African-American and low-income white subjects to increase their representation in the sample. The data of the

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present study were obtained in 1986, when the mothers of the 6 and 7 year old children were 21 to 29 years of age (Table 1 presents descriptive data for the three ethnic sub-samples).

MEASURES: Home visits and interviews conducted in the 1986 survey provided extensive background information from which a variety of maternal and family environment measures were derived. These included the usual socio-economic and demographic indices, as well as the following more specific measures: 1) Mother's general ability: based on the Armed Forces Qualification Test (AFQT); 2) Quality of the home environment: based on an adaptation of the HOME Scale administered to the mother in questionnaire format; 3) Maternal attitude: derived from 9 questions concerning attitudes toward women's roles, with higher scores reflecting more "traditional" attitudes; and 4) Mother's childhood home literacy: based on three questions asked in 1982 indicating whether anyone in the household had a library card, subscribed to newspapers, or to magazines, when the respondent was 14 years of age.

Measures of children's school readiness and early achievement were also obtained during the home visit. These included the Peabody Picture Vocabulary Test (PPVT), and two Peabody Individual Achievement Tests: PIAT Reading Recognition, and PIAT Math.

ANALYSES: Correlational analyses were run between selected predictors and the three school readiness/achievement measures, separately for each of the three ethnic groups. Semi-partial and multiple correlations were also obtained for a small group of predictors in order to evaluate their independent as well as

their combined contribution to the child outcome measures in each of the three ethnic groups. Similar analyses were carried out separately for the six and seven-year-olds.

RESULTS: A number of maternal and family predictors showed consistent significant correlations ($p<.05$ or better) with children's school readiness and achievement in all three ethnic groups (Table 2). These included a) mother's ability level (all nine correlations significant, r's .29 to .51); b) maternal education (all nine significant, r's .15 to .40); and c) family poverty status (8/9 significant, r's -.16 to -.30). Grade level was also a significant predictor especially for Reading and Math (7/9 significant, r's .19 to .42). The HOME scale showed somewhat more modest significant correlations with child outcomes, mainly in the Black and Hispanic groups. There were no consistent predictive relationships for maternal occupation or low birthweight.

It was particularly interesting to note that single-parenthood (no spouse or partner in the household) was consistently unrelated to the measures of school readiness. This was true even though single-parenthood was clearly associated with being poor, particularly in the Black group (Table 3). Moreover, in all three ethnic groups, having a single-parent was unrelated to the child outcome measures even among those families living in poverty.

Two predictors appeared to play somewhat different roles depending on ethnicity: a) spouse education was significantly correlated with school readiness primarily for Hispanic children (r's .37 to .46); and b) traditional maternal attitudes towards

women's roles were substantially associated with lower child outcome measures in the Hispanic group (r's -.23 to -.36), and to a somewhat lesser extent for Black children (r's -.16 to -.22).

When the most relevant predictors were combined in a regression analysis (Table 4), the two most important independent predictors were a) mothers' ability, yielding significant semi-partial correlations in all three ethnic groups for PPVT and Reading, and in White and Hispanic children for Math; and b) child grade level, particularly in regard to Reading and Math (all six semi-partials significant).

It should be noted that after controlling for mothers' ability and child grade, poverty status was no longer related to child outcomes (except for White children and Reading, semi-partial r = -.18). Also, maternal education generally carried no independent predictive value (except for Hispanic children and Math, semi-partial r= .20), and both the HOME scale and traditional maternal attitudes were no longer related significantly to children's school readiness in any of the groups.

In all three ethnic groups, Multiple R's obtained by combining these six predictors yielded considerable increase in prediction over that of the individual variables. The obtained Multiple R's were very similar in the three groups and across the three school readiness measures (R's .43 to .53).

DISCUSSION: The results provide strong evidence of the importance of maternal and family background factors, even within low-income or "at-risk" populations, as predictors of young children's school readiness and early school achievement. It is

particularly noteworthy that, for the most part, these home and family background variables played generally equivalent roles in influencing early school readiness and performance in all three ethnic groups studied. These included mother's general ability level and years of education, as well as poverty status and grade level (the latter mainly in regard to Reading and Math). This pattern of equivalent findings across ethnic groups was observed not only in the overall analyses, but also in the separate analyses for 6 and 7 year olds.

The fact that single-parenthood failed to emerge as a "risk factor" for school readiness in all three ethnic groups is an interesting and somewhat puzzling finding. Single-parent families were clearly more poor than two-parent families, especially in the Black group where 83% of single-parent families were in poverty, and poverty was associated with lower school-readiness scores. At the same time, however, maternal ability and educational levels, which are also significant predictors of school readiness, were generally quite similar for single-parent and two-parent families in each of the ethnic groups (Table 3). A final partial explanation of the lack of relationship between single-parenthood and child outcomes may be the finding that single-parent families were more likely to have the potentially supportive presence of a grandmother or grandfather living in the household; this was particularly true for Black families (Table 3).

The only maternal or family variables which appeared to play somewhat different roles depending on ethnicity were spouse education and traditional maternal attitudes, which were

significant predictors of all three outcome measures among Hispanic families primarily. This would seem to suggest that the father's role, and maternal attitudes toward women's roles, may represent more salient influences on young children's school readiness in Hispanic families than in the other two ethnic groups. More detailed study of family structure and functioning as related to ethnicity would be necessary in order to shed further light on this question.

The results of the regression analyses indicate the importance of mother's ability and children's grade level as the major independent contributors to the substantial Multiple R's obtained for predicting school readiness when the six predictors are combined. It should be noted that mother's ability level reflects both her years of education (r's .51 to .65) and the literacy environment of her home at age 14 (r's = .18 to .40 for 6 yr olds and .23 to .43 for 7 yr olds, all $p<.05$ or better).

CONCLUSIONS: Maternal and family background factors play a significant role as potential influences on school readiness and achievement in 6 and 7 year old children, even within low-income or "at risk" populations. Moreover, for the most part these background factors appear to operate in much the same way as predictors of school readiness in Black, Hispanic and White families, whether poor or not-poor. Some home and family characteristics (e.g.. maternal attitudes, role of spouse) may have somewhat different predictive implications depending on ethnicity, an issue which deserves further study. Single-parenthood, in and of itself, should not automatically be assumed to represent a risk factor for children's school readiness;

rather, understanding the role of single-parenthood requires a more careful analysis of the potential "risk" as well as "buffering" factors which may be associated with it in particular ecological settings.

Table 1

DESCRIPTIVE DATA FOR 3 ETHNIC GROUPS OF 6–7 YR. OLDS:
WHITE (N=306), BLACK (N=273), HISPANIC (N=152)

MEANS	WHITE	BLACK	HISPANIC
Mother Ability (AFQT)	661	456	447
Child Grade	0.8	0.9	0.9
Yrs. Mother Education	11.1	11.5	9.8
Yrs. Spouse Education	11.9	12.2	10.1
Mother Occupation (low score=high occ.)	621	637	601
Spouse Occupation (low score=high occ.)	568	606	589
"Home" Scale	18.8	16.2	16.8
Tradition. Maternal Attitude	2	0.9	2.1
Maternal Age	26.3	25.6	25.8
Net Family Income	$20,658	$14,533	$16,050
Hrs/Week Employed	35	35	32
Hrs/Week Child Care	26	26	23
Number of Children in Household	2.3	2.7	2.8
Highest Grade Mother Would Like	13	13.9	12.8
Mother's Childhood Home Literacy	2.1	1.5	1.2
PERCENTAGES			
In Poverty Status	28.1	61.4	40.3
Mother Employed	59.1	46.8	40.7
Single Parent Status	20.3	57	29.1
G.Mother/G.Father Present in HH	5.5	17.2	9.9
Child Low Birthweight	7.6	14.8	8
Child Gender (%F)	47.4	50.5	50

Table 2

Correlations between selected predictors and school readiness measures in White, Black and Hispanic 6- and 7-year-old children*

PREDICTORS		PPVT	Rdg.Rec.	Math.
Mother Ability**	W	45c	31c	39c
	B	36c	29c	30c
	H	51c	39c	35c
Child Grade	W	08	42c	26c
	B	19b	32c	31c
	H	00	22b	26b
Poverty Status	W	-24c	-25c	-20c
	B	-19b	-16a	-20b
	H	-30b	-16	-23b
Mother Education	W	28c	15b	25c
	B	29c	26c	33c
	H	40c	31c	32c
HOME Scale	W	18b	11	13a
	B	23c	15b	25c
	H	28b	29c	24b
Maternal Attitude (tradit.)	W	-11	-10	-07
	B	-16b	-18b	-22c
	H	-36c	-23b	-24b
Spouse Education	W	20b	08	09
	B	16	14	12
	H	46c	42c	37c
Maternal Occupation	W	-11	-02	-10
	B	-13	-25b	-17a
	H	-21	-08	-13
Spouse or partner Present	W	03	08	00
	B	08	05	05
	H	-02	05	-18a
Low Birthwght.	W	-11	-11	-16b
	B	-13a	-08	-11
	H	-11	-05	-03

* N's = White (270-302); Black (243-272); Hispanic (115-152)

** AFQT (Armed Forces Qualification Test)

a=P<.05; b=P<.01; c=P<.001

Table 3

CHARACTERISTICS OF SINGLE-PARENT AND TWO-PARENT FAMILIES
BY ETHNIC GROUP: WHITE (306), BLACK (273), HISPANIC (152)

	WHITE		BLACK		HISPANIC	
	Single parent	Two-parent	Single parent	Two-parent	Single parent	Two-parent
MEANS						
Mother Ability (AFQT)	637	667	441	476	457	442
Mother Education	10.9	11.2	11.2	11.7	10.5	9.5
"Home" Scale	17.3	19.1	15.1	17.7	15.7	17.3
Tradit. Maternal Attitude	1.7	2.1	1	0.7	0.9	2.5
Maternal Age	25.8	26.4	25.3	26	25.7	25.9
Net Family Income	$11,040	$23,315	$9,157	$21,213	$9,326	$19,215
Hrs/Week Employed	36	34	34	36	35	31
Hrs/Week Child Care	24	27	26	26	26	23
Number of Children in Household	2.1	2.4	2.6	2.8	2.5	2.9
PERCENTAGES						
In Poverty Status	60.7	19.6	83.2	32.4	60.5	30.8
Mother Employed	59.3	58.9	39.2	56.4	37.2	42.1
G.Mother/G.Father Present in HH	9.7	4.5	25.8	6	18.2	6.5
Child Low Birthweight	6.5	7.9	15.7	13.8	11.4	6.7
Child Gender (%F)	46.8	47.3	45.8	57.3	52.3	48.6

Table 4.

Semi–partial and Multiple correlations for predictors of PPVT, Reading, and Math scores for White, Black, and Hispanic 6–7 yr olds

PEABODY PICTURE VOCABULARY

PREDICTORS	White	Black	Hispanic
Moth.Ability	.30c	,21b	.18a
Child Grade	–	.15a	–
Poverty Status	–	–	–
Moth. Educat.	–	–	–
HOME Scale	–	–	–
Mat.Attitude	–	–	–
MULTIPLE R	.49c	.43c	.53c
df	(226)	(199)	(92)

PIAT READING RECOGNITION

	White	Black	Hispanic
Moth.Ability	.19c	.20b	.20a
Child Grade	.40c	.27c	.28b
Poverty Status	–.18b	–	–
Moth. Educat.	–	–	–
HOME Scale	–	–	–
Mat.Attitude	–	–	–
MULTIPLE R	.55c	.46c	.53c
df	(226)	(199)	(92)

PIAT MATH

	White	Black	Hispanic
Moth.Ability	.24c	–	.18a
Child Grade	.26c	.26c	.25b
Poverty Status	–	–	–
Moth. Educat.	–	–	.20a
HOME Scale	–	–	–
Mat.Attitude	–	–	–
MULTIPLE R	.49c	.49c	.52c
df	(226)	(199)	(92)

a = P<.05; b = P<.01; c = P<.001